UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/461,160	12/14/1999	JOHN THORNLEY	06618/389001	3403

20985 7590 08/05/2003

FISH & RICHARDSON, PC
4350 LA JOLLA VILLAGE DRIVE
SUITE 500
SAN DIEGO, CA 92122

EXAMINER	
VO, LILIAN	
ART UNIT	PAPER NUMBER
2127	7

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/461,160	Applicant(s) THORNLEY ET AL.	
	Examiner Lilian Vo	Art Unit 2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 December 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *46 - 59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *46 - 54 and 56* is/are rejected.

7)☒ Claim(s) *55 and 57 - 59* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 46 – 59 are presented for examination.

Election/Restrictions

2. Claims 1 – 45 and 60 – 84 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

Drawings

3. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 46 – 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 46 recites the limitation "said statement", "the programs", in line 5 and 6, page 67, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claims 47, 48, 50 recite the limitation "the statements" in lines 2, page 67. There is insufficient antecedent basis for this limitation in the claim.

Claims 47, 48, 51 and 52 recite the limitation "the equivalence annotation" in line 2, page 67 and 68. There is insufficient antecedent basis for this limitation in the claim.

Claim 49 recites the limitation "said multithreaded statements" in line 2, page 67. There is insufficient antecedent basis for this limitation in the claim.

Claim 50 recites the limitation "said multithreadable annotations" in line 2, page 67. There is insufficient antecedent basis for this limitation in the claim.

Claim 57 recites the limitation "said synchronization counter" in line 1 - 2, page 68. There is insufficient antecedent basis for this limitation in the claim.

For the purpose of the examination, the Examiner will assume claim 57 is depending on claim 54.

Claim 58 recites the limitation "said s counter" and "said check operation", in line 1- 2, page 68. There is insufficient antecedent basis for this limitation in the claim.

For the purpose of the examination, the Examiner will assume that claim 58 is depending on claim 55 and "s counter" is synchronization counter.

Correction is required to overcome these types of rejections for the claims stated above.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claim 46 is rejected under 35 U.S.C. 102(e) as being anticipated by Burrows et al. (US 6,009,269 hereafter referred to Burrows).

Regarding **claim 46**, Burrows discloses a method of operating a program language, comprising:

defining equivalence annotations within the programming language which indicate to a program development system of the programming language information about sequential execution of a statement (col. 8, lines 32 - 59); and

developing the programs as a sequential execution or as a substantially simultaneous execution based on contents of the equivalence annotations (abstract, col. 1, lines 44 – 54, col. 8, lines 21 - 59).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 47 – 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows et al. (US 6,009,269 hereafter referred to Burrows) in view of Applicants' admitted prior art.

Regarding **claims 47 and 48**, although Burrows's system is implemented with multi-threaded programs (abstract, col. 1, lines 11 – 16 and 44 – 54), he did not clearly indicate multithreadable statements in the annotations. Further, the concepts of multithreadable and equivalence annotations are considered well known in the applicants' admitted prior art (page 1, lines 19 – 26, page 8, lines 7 – 20, and page 12, lines 5 - 12). Therefore, it would have been obvious for one of ordinary skill in the art, at the time the invention was made, to combine the applicants' admitted prior to the system of Burrows, to develop a program with annotations such as multithreaded or multithreadable statement to indicate the programmer's intention (Burrows, col. 8, lines 33 – 34).

Regarding **claims 49,** Burrows discloses the execution in a multithreaded manner (col. 1, lines 11 – 16 and 44 – 49).

Regarding **claims 50,** Burrows discloses the execution in either multithreaded manner (col. 1, lines 11 – 16 and 44 – 49) or sequential manner (col. 8, lines 21 – 26).

Regarding **claims 51,** although Burrows discloses of the annotation (col. 8, lines 32 – 59), he did not clearly indicate the annotation is a pragma. Nevertheless, applicants' admitted prior art discloses annotation such as pragma is a well-know concept (specification page 8, lines 7 – 20). Therefore, it would have been obvious for one of ordinary skill in the art, at the time the

invention was made, to incorporate the teaching of applicants' admitted prior art to Burrows's program to clearly indicate the programmer's intention.

Regarding **claims 52,** Burrows discloses annotation is a specially-defined comment line (col. 8, lines 32 – 37).

Regarding **claims 53,** Burrows discloses synchronizing access of threads to shared memory using a specially defined synchronization element (col. 3, lines 36 – 53 and fig. 2).

10. Claim 54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows et al. (US 6,009,269 hereafter referred to Burrows) in view of Applicants' admitted prior art and further in view of Brown et al. (US 6,237,043, hereafter referred to Brown).

Regarding **claim 54**, although the combined reference of Burrows and applicants' admitted prior art discloses the method as in claim 53, except wherein the synchronization element is a synchronization counter. Nevertheless, synchronization counter is disclosed in Brown's invention (fig. 6, col. 8, lines 39 – col. 9, lines 9). Therefore, it would have been obvious for one of ordinary skill in the art, at the time the invention was made, to incorporate this feature to Burrows and applicants' admitted prior art for providing shared data synchronization in object-oriented environment, in a manner which is efficient and use little system overhead (col. 3, lines 35 – 47).

Regarding **claim 56**, although the combined reference of Burrows and applicants' admitted prior art discloses the method as in claim 53, except wherein the synchronization element is a synchronization flag. Nevertheless, synchronization flag is disclosed in Brown's invention (fig. 6, col. 8, lines 39 – col. 9, lines 9). Therefore, it would have been obvious for one of ordinary skill in the art, at the time the invention was made, to incorporate this feature to

Burrows and applicants' admitted prior art for providing shared data synchronization in object-oriented environment, in a manner which is efficient and use little system overhead (col. 3, lines 35 – 47).

Allowable Subject Matter

11. Claims 55, 57 – 59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 703-305-7864.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Lilian Vo
Examiner
Art Unit 2127

lv
July 30, 2003

MAJID BANKHAH
PRIMARY EXAMINER